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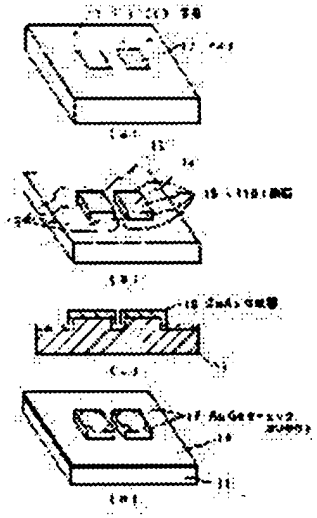
(54) MANUFACTURE OF SEMICONDUCTOR DEVICE

(57)Abstract:
PURPOSE: To increase the integration of element on a substrate, by employing a series of processes in which a plateau-shaped structure having both planes (100) and (110) is formed on a IV crystal substrate, and a III-V compound semiconductor layer is then deposited over the substrate body.
CONSTITUTION: First, plateau-shaped structures 14, each of which has both planes (100) and (110), are formed on a IV crystal substrate 11, respectively. Subsequently, a III-V compound semiconductor layer 16 is deposited over the substrate body using an atomic layer epitaxial growth method. Now, a III source gas and a V source gas are alternately supplied to the substrate 11, which provides the atomic layer epitaxial growth of the III-V compound semiconductor. Therefore, the isolation between elements formed on the substrate can be easily performed without the process being complicated. Accordingly, the integration of the element on the substrate can be effectively increased.



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